

The Status of the Claims

1. (Currently amended) A method to provide a handheld pointer-based user interface comprising:

encoding a first human-computer interaction (HCI) signal with a first code to correspond to a first ~~HCI position event~~ time;

encoding a second HCI signal with a second code to correspond to a second ~~HCI position event~~ time;

transmitting via a first communication link the first HCI signal and the second HCI signal from a wireless pointer component to ~~one or more a base components component~~ a base components component that ~~[[are]] is~~ is operatively coupled to a screen of a display, wherein the first code and the second code differ to indicate a difference between ~~[[a]] the first time at which the first HCI position event occurred~~ [[a]] the first time at which the first HCI position event occurred and ~~[[a]] the second time at which the second HCI position event occurred~~ [[a]] the second time at which the second HCI position event occurred;

generating ~~at least one of operating information and~~ position information associated with the wireless pointer component based on ~~at least~~ one of the first and second HCI signals;

and

transmitting via a second communication link the ~~at least one of operating information and~~ position information from the ~~one or more base components component~~ a base components component to a processor configured to generate screen information on the screen of the display.

2. (Currently amended) A method as defined in claim 1, wherein ~~transmitting via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the one or more base components operatively coupled to the screen of the display comprises transmitting at least one of an ultrasonic signal and a radio frequency signal associated with at least one of the first HCI position event and the second HCI position event from the wireless pointer component to the one or more base components operatively coupled to the screen of the display via the first communication link~~ the first time corresponds to a first position of the wireless pointer component, and wherein the second time corresponds to a second position of the wireless pointer component.

3. (Currently amended) A method as defined in claim 1, further comprising transmitting ~~one or more HCI signals~~ a third HCI signal associated with at least one of writing, drawing, selecting, ~~[[and]]~~ or scrolling directly on the screen of the display with the wireless pointer component by a user.

4. (Currently amended) A method as defined in claim 1, wherein the screen ~~[[of]]~~ of the display is associated with ~~at least~~ one of a desktop computer, a laptop computer, ~~[[and]]~~ or a handheld computer.

5. (Currently amended) A method as defined in claim 1, wherein transmitting via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component operatively coupled to the screen of the display comprises transmitting the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component in response to ~~at least~~ one of pressing a tip of the wireless pointer component on the screen of the display, ~~and or~~ pressing a button of the wireless pointer component.

6. (Currently amended) A method as defined in claim 1, wherein transmitting via the second communication link the ~~at least one of operating information and position~~ information from the ~~one or more base components~~ component to the processor configured to generate screen information on the screen of the display comprises transmitting the ~~at least one of operating information and position~~ information from the ~~one or more base components~~ component to the processor via one or more communication links operating in accordance with ~~at least~~ one of an 802.11-based communication protocol, a Bluetooth-based communication protocol, ~~[[and]]~~ or an infrared-based communication protocol.

7. (Currently amended) A method as defined in claim 1, further comprising converting the ~~at least one of operating information and position~~ information from a first format to a second format based on configuration information associated with ~~at least~~ one of the ~~one or more base components~~ component ~~[[and]]~~ or the screen of the display.

8. (Currently amended) A method as defined in claim 1, further comprising generating one or more coordinates of the wireless pointer component relative to the screen of the display based on the ~~at least one of operating information and~~ position information.

9. (Currently amended) A method as defined in claim 1, further comprising operatively coupling the ~~one or more base components~~ component on ~~one or more sides~~ a side of the display to receive the first HCI signal and the second HCI signal.

10. (Currently amended) A machine readable medium storing instructions, which when executed, cause a machine to:

encode a first human-computer interaction (HCI) signal with a first code to correspond to a first ~~HCI position event~~ time;

encode a second HCI signal with a second code to correspond to a second ~~HCI position event~~ time;

transmit via a first communication link the first HCI signal and the second HCI signal from a wireless pointer component to ~~one or more a base components~~ component that ~~[[are]]~~ is operatively coupled to a screen of a display, wherein the first code and the second code differ to indicate a difference between ~~[[a]] the first time at which the first HCI position event occurred and a the second time at which the second HCI position event occurred;~~

generate ~~at least one of operating information and position information of~~ associated with the wireless pointer component based on ~~at least~~ one of the first and second HCI signals; and

transmit via a second communication link the ~~at least one of operating information and position~~ information from the ~~one or more base components~~ component to a processor configured to generate screen information on the screen of the display.

11. (Currently amended) A machine readable medium as defined in claim 10, wherein ~~the instructions cause the machine to transmit via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the one or more base components operatively coupled to the screen of the display by transmitting via the first communication link at least one of an ultrasonic signal and a radio frequency signal associated with at least one of the first HCI position event and the second HCI position event from the wireless pointer component to the one or more base components operatively coupled to the screen of the display~~ the first time corresponds to a first position of the wireless pointer component, and wherein the second time corresponds to a second position of the wireless pointer component.

12. (Currently amended) A machine readable medium as defined in claim 10, wherein the instructions, when executed, cause the machine to transmit via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component operatively coupled to the screen of the display by transmitting ~~one or more HCI signals~~ a third HCI signal associated with at ~~least one of writing, drawing, selecting, [[and]]~~ or scrolling directly on the screen of the display with the wireless pointer component by a user.

13. (Currently amended) A machine readable medium as defined in claim 10, wherein the instructions, when executed, cause the machine to transmit via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component operatively coupled to the screen of the display by transmitting the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component operatively coupled to the screen of the display associated with ~~at least~~ one of a desktop computer, a laptop computer, ~~[[and]]~~ or a handheld computer.

14. (Currently amended) A machine readable medium as defined in claim 10, wherein the instructions, when executed, cause the machine to transmit via the first communication link the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component operatively coupled to the screen of the display by transmitting the first HCI signal and the second HCI signal from the wireless pointer component to the ~~one or more base components~~ component in response to ~~at least one of pressing a tip of the wireless pointer component on the screen of the display, and~~ or pressing a button of the wireless pointer component.

15. (Currently amended) A machine readable medium as defined in claim 10, wherein the instructions, when executed, cause the machine to convert the ~~at least one of operating information and~~ position information from a first format to a second format based on configuration information associated with ~~at least one of the one or more base components~~ component ~~[[and]]~~ or the screen of the display.

16. (Currently amended) A machine readable medium as defined in claim 10, wherein the instructions, when executed, cause the machine to generate one or more coordinates of the wireless pointer component relative to the screen of the display based on ~~the at least one of operating information and~~ position information.

17. (Currently amended) An apparatus to provide a handheld pointer-based user interface comprising:

a wireless pointer component configured to transmit via a first communication link a first human-computer interaction (HCI) signal and a second HCI signal, wherein the first HCI signal is to be encoded with a first code to correspond to a first ~~HCI position event time~~, wherein the second HCI signal is to be encoded with a second code to correspond to a second ~~HCI position event time~~;

~~one or more~~ a base components component operatively coupled to a screen of a display to receive via the first communication link the first and second HCI signals from the wireless pointer component, the one or more base components being configured to generate ~~at least one of operating information and~~ position information associated with the wireless pointer component based on the first and second HCI signals, wherein the first code and the second code differ to indicate a difference between ~~[[a]] the first time at which the first HCI position event occurred~~ and ~~[[a]] the second time at which the second HCI position event occurred~~; and

a processor configured to generate screen information on a screen of a display, wherein the processor is to receive via a second communication link the ~~at least one of operating information and~~ position information from the ~~one or more base components component~~.

18. (Currently amended) An apparatus as defined in claim 17, wherein ~~at least one of the first and second HCI position events comprises at least one of writing, drawing, selecting, and scrolling directly on the screen of the display with the wireless pointer component by a user~~ the first time corresponds to a first position of the wireless pointer component, and wherein the second time corresponds to a second position of the wireless pointer component.

19. (Currently amended) An apparatus as defined in claim 17, wherein the wireless pointer component comprises ~~at least one of a stylus~~ [[and]] or an electronic pen.

20. (Currently amended) An apparatus as defined in claim 17, wherein the screen information comprises one or more coordinates calculated based on the ~~at least one of operating information and position information.~~

21. (Currently amended) An apparatus as defined in claim 17, wherein the processor comprises ~~at least one of a desktop computer, a laptop computer,~~ [[and]] or a handheld computer.

22. (Currently amended) An apparatus as defined in claim 17, wherein the display comprises ~~at least one of a cathode ray tube (CRT) display, a liquid crystal display (LCD), a light-emitting diode (LED) display,~~ [[and]] or a plasma display.

23. (Currently amended) An apparatus as defined in claim 17, wherein the second communication link operates in accordance with ~~at least~~ one of a an 802.11-based communication protocol, a Bluetooth-based communication protocol, ~~[[and]]~~ or an infrared-based communication protocol.

24. (Currently amended) A processor system to provide a handheld pointer-based user interface comprising:

a display having a screen configured to generate ~~at least~~ one of text ~~[[and]]~~ or graphics;

a processor operatively coupled to the display to generate screen information on the screen of the display; and

a handheld pointer-based user interface device having a wireless pointer component configured to transmit via a first communication link one or more human-computer interaction (HCI) signals associated with one or more HCI position events, wherein a first one of the one or more HCI signals [[are]] is encoded differently from a second one of the HCI signals to indicate a difference in time between a first time corresponding to the first one of the HCI signals and a second time corresponding to the second one of the HCI signals ~~of occurrence between the one or more HCI position events~~, and ~~one or more~~ a base components component operatively coupled to the screen of the display to receive via the first communication link the ~~one or more~~ HCI signals from the wireless pointer component and configured to generate ~~at least one of operating information and~~ position information associated with the wireless pointer component based on the ~~one or more~~ HCI signals, and to transmit via a second communication link the ~~at least one of operating information and~~ position information from the one or more base components to the processor.

25. (Currently amended) A processor system as defined in claim 24, wherein the ~~one or more HCI position events comprises at least~~ HCI signals correspond to one of writing, drawing, selecting, ~~[[and]]~~ or scrolling directly on the screen of the display with the wireless pointer component by a user.

26. (Currently amended) A processor system as defined in claim 24, wherein the wireless pointer component comprises ~~at least~~ one of a stylus ~~[[and]]~~ or an electronic pen.

27. (Currently amended) A processor system as defined in claim 24, wherein the screen information comprises one or more coordinates calculated based on the ~~at least one of operating information and~~ position information.

28. (Currently amended) A processor system as defined in claim 24, wherein the processor comprises ~~at least~~ one of a desktop computer, a laptop computer, ~~[[and]]~~ or a handheld computer.

29. (Currently amended) A processor system as defined in claim 24, wherein the display comprises ~~at least~~ one of a cathode ray tube (CRT) display, a liquid crystal display (LCD), a light-emitting diode (LED) display, ~~[[and]]~~ or a plasma display.

30. (Currently amended) A processor system as defined in claim 24, wherein the second communication link operates in accordance with ~~at least~~ one of a an 802.11-based communication protocol, a Bluetooth-based communication protocol, ~~[[and]]~~ or an infrared-based communication protocol.